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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,672	12/05/2003	Eric Halstead	ST8777US	8867

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EXAMINER	
WASHBURN, DOUGLAS N	

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/728,672	HALSTEAD ET AL.	
	Examiner	Art Unit	
	Douglas N. Washburn	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,9,13,14 and 19-21* is/are rejected.

7)☒ Claim(s) *3,5-8,10-12 and 15-18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1 The abstract of the disclosure is objected to because it exceeds 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Summers et al. (US 2004/0128099) (Hereafter referred to as Summers).

Summers teaches:

A primary data acquisition circuit (A/D converter # 1, CPU # 1; figure 1, elements 4 and 6) for receiving signals from at least a first sensing device (first sensor; ¶ 0017, line 3; figure 1, element 1) in regard to claim 1;

A first processing means (first cpu; ¶ 0017, lines 5 and 6; figure 1, element 6) for processing data received from said first sensing device in regard to claim 1;

A secondary data acquisition circuit (A/D converter # 2, CPU # 2; figure 1, elements 5 and 7) for receiving data from at least a second sensing device (second sensor; ¶ 0017, line 4; figure 1, element 2), wherein said first sensing device and said second sensing device provide data indicative of a condition of the same operating parameter (temperature; ¶ 0017, lines 3 and 4) in regard to claim 1;

A second processing means (second cpu; ¶ 0017, line 6; figure 1, element 7) for processing data received from said second sensing device in regard to claim 1;

An analog-to-digital conversion means (first/second A/D converter; ¶ 0017, line 5; figure 1, elements 4 and 5) for converting analog data to digital data, said secondary data acquisition circuit electrically connected with said primary data acquisition circuit (figure 1) in regard to claim 1;

An operating parameter is selected from the group consisting of a fluid temperature (¶ 0005, lines 2-4), a fluid pressure and a fluid volume in regard to claim 2;

A first sensing device is a first temperature sensor, and said second sensing device is a second temperature sensor (¶ 0017, lines 3 and 4) in regard to claim 4;

And an analog-to-digital conversion means receives analog sensor data from said second sensing device, and converts said analog sensor data to digital sensor data (¶ 0018, lines 1-5) in regard to claim 9.

Claims 13 and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Piety et al. (US 5,965,819) (Hereafter referred to as Piety).

Piety teaches:

A primary data acquisition circuit (receiver circuit; column 4, lines 4 and 5; figure 1, element 12) for receiving signals from a sensing device (sensor; column 3, line 67; figure 1, element 10) in regard to claim 13;

A first processing means (microprocessor; column 4, line 9; figure 1, element 16) for processing data received from said sensing device in regard to claim 13;

A secondary data acquisition circuit (receiver circuit; column 4, lines 4 and 5; figure 1, element 14) for receiving data from said sensing device, wherein said sensing device provides data indicative of a condition of an operating parameter in regard to claim 13;

A second processing means (microprocessor; column 4, line 9; figure 1, element 18) for processing data received from said sensing device in regard to claim 13;

An analog-to-digital conversion means (analog to digital converter; column 5, lines 24 and 25; figure 2, elements 28 and 30) for converting analog data to digital data, said secondary data acquisition circuit electrically connected with said primary data acquisition circuit (figure 1) in regard to claim 13;

An analog-to-digital conversion means receives analog sensor data from said sensing device, and converts said analog sensor data to digital sensor data (column 5, lines 40-43) in regard to claim 19;

A second processing means assembles parallel data associated with said sensing device, said parallel data received by said primary data acquisition circuit (column 4, lines 31-36) in regard to claim 20;

And a first processing means includes means (column 4, lines 60-65) for comparing said parallel data from said secondary data acquisition circuit to the data received from said sensing device (column 4, lines 53-57) in regard to claim 21.

Claim Rejections - 35 USC § 103

3 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Piety in view of Summers.

Piety teaches:

A primary data acquisition circuit (receiver circuit; column 4, lines 4 and 5; figure 1, element 12) for receiving signals from a sensing device (sensor; column 3, line 67; figure 1, element 10) in regard to claim 13;

A first processing means (microprocessor; column 4, line 9; figure 1, element 16) for processing data received from said sensing device in regard to claim 13;

A secondary data acquisition circuit (receiver circuit; column 4, lines 4 and 5; figure 1, element 14) for receiving data from said sensing device, wherein said sensing device provides data indicative of a condition of an operating parameter in regard to claim 13;

A second processing means (microprocessor; column 4, line 9; figure 1, element 18) for processing data received from said sensing device in regard to claim 13;

An analog-to-digital conversion means (analog to digital converter; column 5, lines 24 and 25; figure 2, elements 28 and 30) for converting analog data to digital data, said secondary data acquisition circuit electrically connected with said primary data acquisition circuit (figure 1) in regard to claim 13;

An analog-to-digital conversion means receives analog sensor data from said sensing device, and converts said analog sensor data to digital sensor data (column 5, lines 40-43) in regard to claim 19;

A second processing means assembles parallel data associated with said sensing device, said parallel data received by said primary data acquisition circuit (column 4, lines 31-36) in regard to claim 20;

And a first processing means includes means (column 4, lines 60-65) for comparing said parallel data from said secondary data acquisition circuit to the data received from said sensing device (column 4, lines 53-57) in regard to claim 21.

Piety is silent regarding:

An operating parameter is selected from the group consisting of: a fluid temperature, a fluid pressure and a fluid volume in regard to claim 14.

Summers teaches:

A primary data acquisition circuit (A/D converter # 1, CPU # 1; figure 1, elements 4 and 6) for receiving signals from at least a first sensing device (first sensor; ¶ 0017, line 3; figure 1, element 1) in regard to claim 1;

A first processing means (first cpu; ¶ 0017, lines 5 and 6; figure 1, element 6) for processing data received from said first sensing device in regard to claim 1;

A secondary data acquisition circuit (A/D converter # 2, CPU # 2; figure 1, elements 5 and 7) for receiving data from at least a second sensing device (second sensor; ¶ 0017, line 4; figure 1, element 2), wherein said first sensing device and said second sensing device provide data indicative of a condition of the same operating parameter (temperature; ¶ 0017, lines 3 and 4) in regard to claim 1;

A second processing means (second cpu; ¶ 0017, line 6; figure 1, element 7) for processing data received from said second sensing device in regard to claim 1;

An analog-to-digital conversion means (first/second A/D converter; ¶ 0017, line 5; figure 1, elements 4 and 5) for converting analog data to digital data, said secondary data acquisition circuit electrically connected with said primary data acquisition circuit (figure 1) in regard to claim 1;

An operating parameter is selected from the group consisting of a fluid temperature (¶ 0005, lines 2-4), a fluid pressure and a fluid volume in regard to claim 2;

A first sensing device is a first temperature sensor, and said second sensing device is a second temperature sensor (¶ 0017, lines 3 and 4) in regard to claim 4;

And an analog-to-digital conversion means receives analog sensor data from said second sensing device, and converts said analog sensor data to digital sensor data (¶ 0018, lines 1-5) in regard to claim 9.

Regarding claim 14, it would have been obvious to one skilled in the art at the time of the instant invention to modify the teaching of Piety of a secondary data acquisition circuit for receiving data from a sensing device indicative of a condition of an operating parameter with the teaching of Summer of an operating parameter is selected from the group consisting of a fluid temperature, a fluid pressure and a fluid volume because receiving data from a sensing device indicative of fluid temperature would have enabled detection of hazardous process conditions, and to initiate the shut down of one or more process functions when a hazardous temperature condition is detected.

Allowable Subject Matter

4 Claims 3, 5-8, 10-12 and 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Claim 3 recites, in part, "fluid is selected from the group consisting of: water, a cleaning solution, and a disinfection solution". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 5 recites, in part, "first and second temperature sensors are resistance temperature detectors". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 6 recites, in part, "first sensing device is a first pressure sensor, and said second sensing device is a second pressure sensor". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 7 recites, in part, "first and second pressure sensors includes a pressure transducer". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 8 recites, in part, "first sensing device is an air pressure sensor, and said second sensing device is said air pressure sensor". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 10 recites, in part, "second processing means assembles parallel data associated with said second sensing device, said parallel data received by said primary data acquisition circuit". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 11 recites, in part, "first processing means includes means for comparing said parallel data from said secondary data acquisition circuit to the data received from said first sensing device". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 12 recites, in part, "primary data acquisition circuit includes a watchdog timer". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 15 recites, in part, "fluid is selected from the group consisting of: water, a cleaning solution, and a disinfection solution". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 16 recites, in part, "sensing device is selected from the group consisting of: an air pressure sensor, a fluid pressure sensor and a fluid volume sensor.". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 17 recites, in part, "fluid pressure sensor is a pressure transducer". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

Claim 18 recites, in part, "air pressure sensor is a pressure transducer". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

It is these limitations, which are not found, taught or suggested in the prior art of record, and are recited in the claimed combination that makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas N. Washburn whose telephone number is (571) 272-2284. The examiner can normally be reached on Monday through Thursday 6:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DNW

MICHAEL NGHIEM
PRIMARY EXAMINER